

Suh
C1
~~1. (Twice Amended). A transformer core comprising a plurality of segments of amorphous metal strips [forming], said strips each having ends that are formed to be assembled in an interlocking joint, each segment comprising at least one packet of said strips having edges.~~

B1
B2
8. (Amended). A transformer core, as recited by claim 7, wherein said segments [collectively] form a core having [a] an interlocking joint region and said coating is applied to [substantially] the edges of each of said segments except in said interlocking [entire surface area of said core, excluding the] joint region.

Claim 19, line 1, delete "said" (second occurrence) and insert -- a --.

REMARKS

Various grounds for rejection were specified in the Office Action. Applicants will respond to each ground with reference to the specification and claims of the present application. Claims 1, 7, 8 and 14-25 were rejected under 35 U.S.C. 112 (first paragraph) as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor(s), at the time the application was filed, had possession of the invention. The Examiner states that the applicants fail to disclose written description of "an interlocking joint." Applicants respectfully submit that the specification contains a written description of "an interlocking joint" at page 8, line 20, which is also clearly shown in Figure 8 (Interlocking joint [33]). Thus, applicants submit that 35 U.S.C. 112 (first paragraph) is satisfied on this point.

Claims 1, 7, 8 and 14-25 were rejected under 35 U.S.C. 112 (second paragraph) as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Independent claim 1 has now been further amended to include sufficient structure to support the recitation of "an interlocking joint." Since dependent claims 7, 8 and 14-25 contain the same recitation as claim 1, from which they depend, applicants submit that the rejection under 35 U.S.C. 112 (second paragraph) has been obviated.

Dependent claim 8 has been amended to more clearly recite that the coating is applied to the edges of each segment of the core except in the interlocking joint region. Support for this amendment is found in the specification at page 6, lines 2-5 and at page 8, lines 1-7. Accordingly, no new matter has been added. The terms "collectively," "substantially" and "the entire surface area" have been deleted from claim 8.

Withdrawal of the rejections under 35 U.S.C. 112 is respectfully requested.

Claims 1-5, 7-9, 14 and 19 were rejected under 35 U.S.C. 102(b) as being anticipated by Olsen (U.S. Patent No. 3,538,474). The Examiner states that Olsen discloses a transformer core comprising a plurality of segments of amorphous metal strips forming an interlocking joint, each segment comprising at least one packet of said strips having edges. Applicants respectfully disagree that the disclosure in Olsen anticipates independent claim 1 of the present application. Olsen describes an improved method of assembling C-type cut cores manufactured from grain oriented material and a method of providing butt-lap joints. However, Olsen does not disclose, teach or suggest a method or apparatus for making an amorphous metal transformer. Olsen's method and resulting butt-lap joints are inapplicable to amorphous metal material because of its flexibility. Olsen refers to grain-oriented magnetic material at column 2, lines 52-53 and to grain-oriented material in claim 1, column 5, line 44. There is absolutely no reference in Olsen to amorphous metal as indicated by the Examiner with regard to the rejection of independent claim 1 and its dependent claims. Applicants also wish to point out that Olsen's patent application was filed in 1968, which was many years before amorphous metal alloys were invented and began to appear in the late 1970s. Accordingly, Olsen cannot anticipate the novel amorphous metal segmented transformers of the present application.

Applicants' previous remarks in the "Amendment And Response To Office Action" dated June 8, 1999, regarding U.S Patent No. 2,548,624 (Sclater) apply equally to Olsen. More specifically, the problems facing Olsen were much different than those faced by amorphous metal transformer manufacturers, because manufacturers of transformers made from grain-oriented magnetic materials, such as SiFe, did not face the sensitive materials handling issues inherent in amorphous metal transformer manufacturing. Like Sclater, Olsen teaches butt-lap joints of materials that are much less flexible than amorphous metal strips, as recited in claim 1.

Moreover, applicants respectfully submit that there is nothing in Olsen that would teach or suggest to one skilled in the art to look to his solution to solve the handling and manufacturing problems associated with amorphous metal transformer cores, since there is no teaching or disclosure of amorphous metals. Furthermore, even if one of ordinary skill in the art were to look to Olsen, one would still not arrive at the interlocking joint and/or overlap and underlap joint segmented transformer of applicants' present invention, since Olsen merely teaches butt-lap joints of grain-oriented magnetic materials. In contrast, the segmented amorphous metal transformer core recited in claim 1 ensures ease of manufacture and proper alignment of the core laminations in order to avoid unnecessary core losses.

Dependent claims 2-5, 7-9, 14 and 19, which were rejected under 35 U.S.C. 102 as anticipated by Olsen, are submitted as being similarly patentable like claim 1 since there is no teaching or suggestion in Olsen relating to amorphous metal transformer cores. In addition, Olsen does not teach some of the specific features contained in some of these claims, such as claims 2-5. As previously stated, Olsen discloses both in referring to the prior art and in his invention, only butt-lap joints.

The remaining obviousness rejections under 35 U.S.C. 103(a) are based upon Olsen individually, or Olsen as a primary reference combined with either Lee et al. (U.S. Patent No. 5,134,771), Granfield (U.S. Patent No. 2,465,798) or Ames et al. (U.S. Patent No. 4,450,206). Since Olsen neither teaches nor suggests amorphous metal transformer cores, applicants respectfully submit that Olsen cannot form the basis for an obviousness rejection. Furthermore, the combination of Olsen with the other references cited by the Examiner would not be proper. The Federal Circuit has stated that there must be something in the reference to suggest the desirability of the proposed combination. *In re Grabiak*, 226 USPQ 870 (Fed. Cir. 1985). The absence of a suggestion to combine is dispositive. *Cambro Lundia AB v. Baxter Healthcare Corp.*, 42 USPQ2d 1378 (Fed. Cir. 1997). Accordingly, applicants submit that dependent claims 6, 15-18 and 20-26 are patentable like claim 1.

For the reasons stated hereinabove, applicants submit that all of the remaining claims in this application, as amended, are patentably distinct, and reconsideration and allowance of the claims are respectfully requested.

A petition for a three month extension of time under 37 C.F.R. §1.17(b) is provided herewith.

CONCLUSION

In view of the above amendments and remarks, it is respectfully submitted that all of the remaining claims are patentable and in condition for allowance. Early notification to that effect is respectfully solicited. Should the Examiner consider that discussion with the applicants' representative would advance the prosecution of this application, he is respectfully requested to telephone the undersigned.

Respectfully submitted,

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